

On page 15, line 1, delete "and method are" and insert --is--.

In the Claims:

1. (Amended) An apparatus for treating solid-containing waste [A heat exchanger], comprising:

a rotatable drum having first and second ends and a heating section therebetween;  
means for feeding a waste stream containing solids and liquids into said first end;  
a heater in thermal contact with said heating section for heating said waste stream  
such that at least some of the liquids in said waste stream are vaporized, leaving solids;

an oxidizing section between said heating section and said second end, for  
receiving solids from said heating section and contacting said solids with oxygen so as  
to oxidize any remaining oxidizable material on said solids;

means for removing said solids from said second end of said drum separately  
from said vapors; [and]

means for removing said vapors from said first end of said drum separately from  
said solids;

an oil spray chamber in communication with said drum, for receiving said vapors  
from said drum and contacting said vapors with an oil mist in order to remove solid  
particulate matter from said vapors, said oil spray chamber further including a collection  
area for collecting said oil mist as a solid-containing liquid;

a cyclone for separating said solid-containing liquid into substantially solid-free  
oil and solid-concentrated oil;

first pipe means for returning said substantially solid-free oil to said oil spray

chamber for use as oil mist; and

second pipe means for returning said solid-concentrated oil to said drum with said waste stream;

third pipe means for alternatively charging said solid-concentrated oil to said heating section such that some of said solid-concentrated oil is cracked into lower-boiling compounds.

2. (Amended) The apparatus [heat exchanger] according to claim 1 wherein said heater comprises a burner and a heating duct coaxial with said rotatable drum, said heating section having a hotter [hot] end adjacent said burner and a cooler end remote from said burner.

A' 3. (Amended) The apparatus [heat exchanger] according to claim 2 further including a condenser in communication with said drum and said burner, for receiving said vapors from said drum, condensing some of said vapors into a recondensed liquid stream, and feeding an uncondensed portion of said vapors to said burner.

4. (Amended) The apparatus [heat exchanger] according to claim 2 wherein said means for feeding is coaxial with said rotatable drum.

5. (Amended) The apparatus [heat exchanger] according to claim 1 wherein said rotatable drum is sealed to prevent the material inside the drum from coming in contact with the atmosphere.

6. 8. (Amended) A apparatus [heat exchanger], comprising:

a rotatable drum having first and second ends and a heating section therebetween;

means for feeding a waste stream containing solids and liquids into said first end;

a heater including a heater in thermal contact with said heating section for heating

said waste stream such that at least some of the liquids in said waste stream are vaporized, leaving solids;

means for removing said solids from said second end of said drum separately from said vapors;

means for removing said vapors from said first end of said drum separately from said solids; and

an oil spray chamber in communication with said drum and including an oil spray head therein, for receiving said vapors from said drum and contacting said vapors with an oil mist in order to remove solid particulate matter from said vapors and collecting said oil mist as a solid-containing liquid, said chamber further including means for maintaining said chamber at a temperature sufficient to prevent water from condensing in said collected oil mist. *vapor included in said vapors*

*A1 B*  
7. 9. (Amended) The apparatus [heat exchanger] according to claim <sup>8</sup>~~8~~, further comprising a cyclone connected to said oil spray chamber for receiving solid-containing liquid and separating said solid-containing liquid into substantially solid-free oil and solid-concentrated oil.

8. 10 (Amended) The apparatus [heat exchanger] according to claim <sup>9</sup>~~7~~, further comprising pipe means connected between said cyclone and said oil spray chamber, for returning said substantially solid-free oil to said oil spray chamber for use as oil mist.

*[* Kindly cancel claims <sup>9</sup> and 10.

*A2* 11. (Amended) The apparatus [heat exchanger] according to claim <sup>8</sup>~~8~~ wherein said burner

generates hot exhaust gases, further including a gas return line for returning [and] a portion of said hot exhaust gases [are used] to said drum, to prevent material vaporized in said heating section from flowing from said heating section toward said second end [to said solids removing section].

12. (Amended) The apparatus [heat exchanger] according to claim ~~6~~<sup>8</sup> further including a condenser in communication with said oil spray chamber, for receiving said vapors from said oil spray chamber, condensing some of said vapors into a recondensed liquid stream, and feeding an uncondensed portion of said vapors to said burner.

A 2 13. 6. (Amended) The apparatus [heat exchanger] according to claim 1 [2] wherein said burner generates hot exhaust gases, further including a gas injection line for injecting [and] a portion of said hot exhaust gases [are injected] between said heating section and said oxidizing section to prevent back flow of material vaporized in said heating section to said oxidizing section.

[ Please add the following new claim:

A 3  
B 14. 7. The apparatus according to claim 1, further including means for maintaining said vapor included in said vapors chamber at a temperature sufficient to prevent water from condensing in said collected oil mist. ~